AMENDMENTS TO THE SPECIFICATION

Please amend the indicted paragraphs of the specification as detailed below:

[000416] Nucleic acid primers can be selected using a program such as Primer 3 available via the Internet ~~(www-genome.wi.mit.edu/cgi-bin/primer/primer3)~~. The selected primers may be used for amplifying a nucleic acid, for example, by PCR, or directly applied to an array. Uniqueness of a nucleic acid can be tested by performing additional BLAST searches on GenBank and an in-house database. Primers are preferably designed such that melting temperatures are similar, and amplification products are of a similar nucleic acid length. Primers for PCR are generally between 18 and 25 nucleotide bases long. Primers for direct use on a microarray or device are preferably between 50 and 80 nucleotide bases long. Both the amplification product and the single primer should hybridise to DNA that uniquely identifies a gene transcript. Specific programs using various formulas are available for calculating the melting temperature of various lengths of DNA (for example, Primer 3). Alternatively, selected DNA sequences can be provided to Affymetrix for production of a proprietary and custom array. The sequences generated in-house are provided to Affymetrix in Fasta format along with details of which parts of the sequence to be used for the generation of a probe set (11 probes, each 25 nucleotide bases long) for each gene represented on the array.

[000436] In this manner, 3100 unique genes were identified with no similarity to any other gene sequence. Equine genes from GenBank, including repeat elements and intronic sequences, were added to the Genetraks database for sequence comparisons and probe design. Gene sequences were also obtained from GenBank by searching the Expressed Sequence Tag (EST) subset of the public database. Most of the sequences were from equine monocyte and lymphocyte libraries from Georgia State University (available ~~at~~ from the National Center for Biotechnology Information~~www.ncbi.nlm.nih.gov~~).

[000469] The method used for cDNA and cRNA generation was adapted from the protocol provided and recommended by Affymetrix ~~(www.affymetrix.com)~~.